

15 Aug 1989

PS1BA-A

POWER SUPPLY

1. GENERAL. This procurement requires a constant-voltage, constant-current dc power supply.

2. CLASSIFICATION. Type II, Class 5, Style E, and Color R in accordance with MIL-T-28800 for shipboard applications.

2.1 Electromagnetic interference requirements. The requirements of MIL-T-28800 are limited to CE01, CE03, CS01, CS02 (0.05 to 100 MHz), CS06, RE01 (back panel search excluded), RE02 (14 kHz to 1 GHz), and RS03.

3. OPERATIONAL REQUIREMENTS. The equipment shall be capable of operation within the minimum accuracies, limits, and specifications set forth below.

3.1 Output voltage and current. Continuously adjustable from 0 to 40 Vdc, 0 to 5A.

3.1.1 Load regulation. For no-load to full-load excursions: 0.01% + 200 uV voltage regulation, 0.02% + 500 uA current regulation.

3.1.2 Line regulation. For line-voltage variations of $\pm 10\%$: 0.01% + 200 uV voltage regulation, 0.02% + 500 uA current regulation.

3.1.3 Ripple and noise. 200 uVrms or 10 mV peak-to-peak maximum.

3.1.4 Temperature coefficient. For any one degree C change in the ambient temperature: 0.01% + 200 uV voltage regulation, 0.01% + 1 mA current regulation.

3.1.5 Drift. For eight hours with constant line, load, and ambient temperature: 0.03% + 500 mV voltage regulation, 0.03% + 3 mV current regulation.

3.2 Indicator. Output voltage and current. Accuracy: $\pm 2\%$ FS.

3.3 Connectors. Three-way front-panel binding posts for positive output, negative output, and chassis ground connections.

4. GENERAL REQUIREMENTS.

4.1 Power source. MIL-T-28800 nominal power source requirements are invoked. Operation at 400 Hz is not required. Maximum power consumption: 330W.

4.2 Weight. 20 kg (44 lb) maximum.

4.3 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.